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No. 954

IN THE

Supreme Court of the United States

OCTOBER TERM, 1961

ALAMANCE INDUSTRIES, INC., KAYSER-ROTH CORPORATION, and KAYSER-ROTH HOSIERY COMPANY, INC.,

Petitioners

v.

TRIUMPH HOSIERY MILLS, INC., HUDSON HOSIERY COMPANY, BURLINGTON INDUSTRIES, INC., CLAUSSNER HOSIERY COMPANY, and McCALLUM HOSIERY COMPANY,

Respondents.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

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Respondents.

No. .....

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

To the Honorable the Chief Justice and Associate Justices of the Supreme Court of the United States.

Your petitioners, Alamance Industries, Inc., Kayser-Roth Corporation, and Kayser-Roth Hosiery Company, Inc. (hereinafter sometimes collectively referred to as "Kayser-Roth"), respectfully pray that a writ of certiorari issue to the United States Court of Appeals for the Fourth Circuit to review a judgment of that Court dated February 8, 1962 (reprinted in Appendix A hereto).

Opinions of the Courts Below

The opinion of the Court of Appeals for the Fourth Circuit, dated February 8, 1962 (reprinted in Appendix B hereto) is reported at 299 F. 2d 793.

The opinion of the United States District Court, Middle District of North Carolina, dated February 10, 1961, Hayes, District Judge (reprinted in Appendix C hereto) is reported at 191 F. Supp. 652.

Jurisdiction

The judgment of the Court of Appeals was entered February 8, 1962. The jurisdiction of this Court is invoked under 28 U. S. C. § 1254(1). The jurisdiction of the courts below is based on 28 U. S. C. §§ 1338, 2201 and 2202.

Questions Presented

1. In this action for a declaratory judgment that a patent owned by petitioners was invalid and non-infringed, the Court of Appeals affirmed a judgment of invalidity on grounds different from those relied upon by the District Court. The patent in suit teaches a surgical stocking, made of thermoplastic yarn such as nylon, which compresses the leg of the wearer with therapeutic results. The stocking is a new structure combined of elements old in the art; previously the art's frontier had been the "stretch" stocking which clings gently to the leg of the wearer but has only weak compressive force and no substantial therapeutic function. The Court of Appeals reversed the District Court on the issue of invention and held the entire patent invalid for want of invention, in that the new structure which produced the great increase in compressive strength of the patented stocking was discovered by lengthy experiment, rather than by inventive genius. In view of 35 U. S. C. § 103, added in the 1952 patent law revision, which abolished the old requirement of inventive "genius," did the Court of Appeals apply an improper standard of invention?

2. The District Court found that "The result obtained by the patentees was entirely new and unexpected and would not have been obvious to one having ordinary skill in the art at the time of the invention" (Finding of Fact 80, PA 35).[1] This finding is supported by substantial evidence in the record and the Court of Appeals did not purport to hold the finding clearly erroneous. Nonetheless, the Court of Appeals, as an alternative basis for its conclusion of invalidity, held the patentees' discovery "obvious." Was this ruling error in the light of Rule 52(a), F. R. C. P., and 35 U. S. C. § 103?[2]

3. Did the Court of Appeals err in holding all of the claims invalid for excessive breadth on grounds which apply only to some of the claims, and without reading the claims in the light of the specifications?[2]

Statute and Rule Involved

The statute involved is 35 U. S. C. § 103:

> "A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

[1] "PA" refers to Plaintiffs' (Respondents') Appendix, and "DA" to Defendants' (Petitioners') Appendix, both in the Court of Appeals.

[2] Petitioners rely only upon the issue presented by Question 1 as warranting certiorari. We do not suggest that Questions 2 and 3 are of sufficient general import, beyond this case, to warrant certiorari. But should the Court decide to review the issue raised by Question 1, we submit that disposition of the other issues is appropriate.

The Rule involved is Rule 52(a), F. R. C. P.:

> ". . . Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. . . ."

Statement of Facts

Respondents sued Kayser-Roth in the District Court for the Middle District of North Carolina, seeking a declaratory judgment that United States Patent No. 2,841,971 ("the patent") was invalid and not infringed. Jurisdiction was based on 28 U. S. C. §§ 1338, 2201 and 2202.

The patent in suit discloses a product never before seen: a surgical stocking made exclusively of a thermoplastic yarn such as nylon.

Before the invention, the surgical stocking art had concluded, after decades of experiment and investigation, that rubber was an indispensable component of a stocking capable of compressing the wearer's leg with therapeutic force. For the wearer, the price of therapy was rubber's heat, odor, expense and ugliness (Ct. App. Opinion, App. p. 46). The invention eliminated these deficiencies: it produced a stocking which was comparable in appearance and comfort to conventional sheer nylons and yet offered therapeutic benefits comparable to those of stockings containing rubber. Women who had never before been willing to wear surgical stockings eagerly bought the patented article: marketed under the trademark "Supp-hose," it was an immediate, substantial success. At the time of trial, in early 1961, more than 6,000,000 pairs, having a retail value of $34,000,000, had been shipped. As the District Court found in a finding unchallenged by the Court of Appeals, the invention "opened up an entirely new market" (Finding of Fact 57, PA 30).

Respondents, five hosiery manufacturers, brought this action for a declaratory judgment that the patent was invalid, and that stockings manufactured by some respondents, similar to the patented stocking, did not infringe.

The District Court (Hayes, J.) held the entire patent invalid by reason of alleged fraud in its procurement. However, in the interest of avoiding a new trial in the event of reversal on that issue, the District Court also held that:

1. If the entire patent were not invalid because of fraud, certain of its claims would be valid, and various products of respondents would infringe some of these claims; but

2. The patent would be unenforceable in equity because of misuse.

Both sides appealed to the Fourth Circuit. That Court affirmed the result below but on different grounds. The Fourth Circuit ruled that "the testimony precludes . . . the suggestion of fraud" (Ct. App. Opinion, App. B, p. 6b). However, it held the entire patent invalid for want of patentable invention, for obviousness, and for overly broad claims.

The Court of Appeals made, we submit, three errors. First, it reversed the experienced District Judge and found want of patentable invention by the application of an improper standard: the "inventive genius" test abolished in the 1952 revision of the Patent Laws. Second, in holding the patent invalid as "obvious," the Court of Appeals ignored the squarely contrary finding of fact by the District Court which was supported by substantial evidence. Finally, the Court of Appeals held all of the claims overly broad on grounds which apply only to some of the claims, and failed to read the claims in the light of the specifications.

By these errors, the Court of Appeals deprived the patent-holders of the just fruits of a remarkable invention.

one which has not only had a substantial impact on the hosiery industry, but which has for the first time provided attractive, effective and economical relief to sufferers from varicose veins and other leg disorders.

Reasons for Granting the Writ

1. The Court of Appeals Used an Improper Standard of Invention.

The Court of Appeals recognized that

> ". . . for many years the market had been demanding and research had been seeking a surgical-type stocking for women affording therapeutic attributes, but which would be at the same time sheer and otherwise attractive" (Ct. App. Opinion, App. B, p. 4b).

For decades, inventors attempted to meet the need with compressive stockings made wholly or principally of rubber. But rubber stockings, though they exerted a high degree of compressive force, were entirely inadequate in other ways:

> ". . . they were neither popular nor practicable because the rubber made them heavy, thick and hot; they were expensive, unattractive and did not launder readily" (Ct. App. Opinion, App. B, p. 4b).

Eventually it was realized that only a stocking made entirely of thermoplastic yarn—for example, nylon—could combine therapy with beauty, economy and comfort. Accordingly, the industry developed a stocking made of "Helanca"—nylon yarn which has been curled or crimped to make it springy. But Helanca, too, was a failure. It has only slight compressiveness and hence no therapeutic value save in very mild cases (Dist. Ct. Opinion, App. C, p. 3c;

Finding of Fact 6; PA 19). Nor was it attractive: it was heavy and thick, like a cotton stocking (DA 209).

The inventors of the patent in suit had tried an all-Helanca stocking as early as 1952, but found that it was not sufficiently compressive (DA 66). In 1956, they tried and failed to construct a satisfactory surgical stocking from a mixture of Helanca and rubber (DA 66).

In the same year the inventors achieved success, by a novel combination of elements old in the art. It had been known for years that nylon yarn, if twisted, tends to untwist; such yarn is said to have "torque." When torque yarn is knit into fabric, the torque causes the rows of knit loops to lean to the right or left, depending on whether the yarn was twisted clockwise or counter-clockwise. If alternate rows are knit of yarn twisted in opposite directions, the knit fabric will have elastic properties. When it is stretched, the loops of yarn will be distorted; seeking to regain their original position, they tend to pull the fabric back to its unstretched shape.

The hosiery industry had used such fabric in the manufacture of "stretch" stockings which cling gently to the leg of the wearer, thus insuring a better fit and smoother appearance.

Some persons skilled in the art had speculated that, since these "stretch" stockings exerted a gentle compressive force on the leg, they might have some therapeutic properties. Indeed, an employee of respondent Burlington Industries, Incorporated, tested his company's heaviest stretch stockings for therapeutic attributes but found them no better than Helanca stockings (PA 335, 337, DA 211).

Pressing on beyond this failure, the inventors discovered that the structure of stretch stockings could be modified to produce a stocking which had compressiveness almost equal to that of all-rubber stockings, but which nevertheless retained the economy, beauty and comfort of nylon. The

modifications involved a number of changes in structure. The yarn must have a high degree of torque within a specified range; it must be specially treated to make the "liveliness" resulting from high torque manageable in knitting; a plurality of yarns, each having an appropriate "denier" (yarn weight) must be knit together but the yarns must be substantially independent rather than tightly plied, or twisted about one another; and the stocking as a whole must be of an unusual shape in its relaxed condition (Patent, DA 58 66).

By painstaking experiment, the inventors discovered that a careful balance of these structural modifications resulted in an entirely new product: an all-nylon surgical stocking having a substantial and effective therapeutic compressive force. Between the stocking of the invention and the old stretch stocking, the difference is simply this: the old stocking was not an effective therapeutic device, and the new stocking is. The great difference in compressive force is not a mere difference in degree, a difference between a product which does a job and a product which does it better. Rather, the difference is a quantum jump—a jump from a stocking which does not perform a therapeutic function to one which does.

The Court of Appeals, like the District Court, recognized this difference:

> "Manifestly, the prior types [stretch stockings] did not give 'enough' compressiveness; but the patent fabric does give 'sufficient' compression to be of 'appreciable therapeutic value'. This added force is developed by the combination of previously known elements to produce this more effective result" (Ct. App. Opinion, App. B, p. 9b).

Nevertheless, the Court of Appeals, reversing the District Court, found the entire patent invalid for want of

invention. This result followed, we submit, from the application of an improper standard of invention: the old requirement of inventive "genius."

Wrenching a phrase from the context of an entirely different case, the Court of Appeals ruled that there was lack of patentable invention in that the "new measure of strength of the patented stocking" "can be achieved by "patient experiment", * * * no inventive genius is necessary'" (Ct. App. Opinion, App. B, p. 11b).

The Court thus invalidated the invention because of the manner in which it was made, because it proceeded from "long and patient experiment" rather than from a "flash of genius." In so doing, the Court overlooked the fact that the old "flash of genius" or "inventive genius" test was abolished in the 1952 patent law revision by 35 U. S. C. § 103:

> "* * * Patentability shall not be negatived by the manner in which the invention was made."

The Senate Report accompanying the bill which included 35 U. S. C. § 103 explained its purpose:

> "The second sentence [quoted above] states that patentability as to this requirement is not to be negatived by the manner in which the invention was made, that is, it is immaterial whether it resulted from long toil and experimentation or from a flash of genius." Appendix, Senate Report No. 1979, 82d Congress, 2d Session, reprinted in *2 U. S. Code Congressional and Administrative News* (1952) 2411.

Of course, late in its opinion the Court of Appeals suggested that it need not rule on whether 35 U. S. C. § 103 invalidated the "flash of genius" test (Ct. App. Opinion, App. B, p. 15b). On this record, however, we submit, the patent must be held valid unless the "flash of genius"

standard is applied. For by any less exacting requirement, this patent clearly embodies patentable invention.

The Fourth Circuit's use of the wrong standard of patentability and its refusal to consider the effect of 35 U. S. C. § 103 result, we suggest, from the fact that this Court has never passed upon the statute or construed its effect. Hence, there is considerable divergence among the Courts of Appeals on the issue.

The Third Circuit, for example, has completely abandoned the "flash of genius" test, *Fisch* v. *Gould*, 240 F. 2d 5, 7 (3d Cir. 1957), *cert. denied* 355 U. S. 914 (1958). So has the First Circuit, *Emerson* v. *National Cylinder Gas Company*, 251 F. 2d 152, 155 (1st Cir. 1958). But despite the enactment of 35 U. S. C. § 103 the Fifth Circuit has characterized the quality of invention which will result in patentability as "'creative' or 'as revealing 'genius'," *Fairchild* v. *Poe*, 259 F. 2d 329, 332 (5th Cir. 1958), and the Ninth Circuit has unequivocally stated that an invention to be patentable "must reveal the flash of creative genius," *Fowler* v. *Vimcar Sales Co.*, 216 F. 2d 263, 265 (9th Cir. 1954).

We submit that this divergence and confusion among the Courts of Appeals require this Court to construe 35 U. S. C. § 103. This case is an unusually appropriate one for such construction, for the patent involved is of substantial importance (DA 394-5, 397, 417-20; PA 30), and the issue is presented in the clear factual context of an invention consisting of a novel combination of old elements achieved through long and patient experiment. Accordingly, the writ should be granted.

2. The Erroneous Reversal of the Non-Obviousness Finding.

The District Court found that it was "obvious" to one skilled in the art to add strength to stretch stockings by such means as increasing the denier (weight) of the thread.

using additional yarns or changing the shape (Findings of Fact 31-35, PA 25-6). But, the Court found, it was *not* obvious to use a carefully-selected variety of these techniques to produce not a "stretch" stocking but a surgical stocking. The District Court found:

> Finding of Fact 80: ". . . The result obtained by the patentees was entirely new and unexpected and would not have been obvious to one having ordinary skill in the art at the time of the invention." (PA 35)

The Court of Appeals completely misunderstood the distinction thus carefully and properly made by the District Court. The Court of Appeals ruled the entire invention "obvious"—without even mentioning the District Court's unequivocal finding to the contrary. Rather, the Court of Appeals pointed only to the District Court's findings as to the "obviousness" of means by which relatively inconsequential variations in stretch stockings might be achieved.

Finding of Fact 80 was the heart of the District Court's decision on validity: it underlay the District Court's ultimate ruling that the patent was valid. Hence, the Court of Appeals erred in setting this finding aside without even mentioning it—let alone holding it "clearly erroneous." Rule 52(a), F. R. C. P.

3. The Court of Appeals Erred in Finding All Claims Impermissibly Broad.

Reversing the District Court, the Court of Appeals held that the entire patent was invalid because of its "impermissible reach" (Ct. App. Opinion, App. B, p. 16b). In so doing, the Court made two errors: it proclaimed the entire patent to be invalid on grounds which apply only to some of the claims; and it did not read the claims in the light of the specifications.

Thus, the Court erroneously stated that the "claims would encompass a stocking of any number of ends exceeding one" (Ct. App. Opinion, App. B, p. 16b). In fact, however, many claims are limited to three or four ends (claims 8, 9, 10, 11, 12, 13, 14, 15, 17-20, PA 64-5). Further, the Court objected to some of the claims on the ground that they do not prescribe a specified degree of compressiveness, but employ only the word "compressive." But if there were any doubt as to the meaning of the word "compressive," the specifications might be consulted for precise definition. *Smith v. Snow*, 294 U. S. 1, 14 (1935); *Reynolds v. Whitin Mach. Works*, 167 F. 2d 78, 85 (4th Cir. 1948), *cert. denied*, 334 U. S. 844 (1948). Moreover, most of the claims found valid by the District Court do specify degrees of compression; at the very least, it was error to invalidate the patent as a whole on grounds not applicable to these claims. Each claim must be considered in the light of the specifications; and upon such consideration, at least the claims held valid by the District Court are valid in form and breadth.

Conclusion

For the foregoing reasons, this petition for a writ of certiorari should be granted.

Respectfully submitted.

JAY H. TOPKIS
Attorney for Petitioners

New York, New York
May 8, 1962

APPENDIX A

Decree of the Court of Appeals

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

TRIUMPH HOSIERY MILLS, INC., HUDSON HOSIERY COMPANY, BURLINGTON INDUSTRIES, INC., CLAUSSNER HOSIERY COMPANY, and McCALLUM HOSIERY COMPANY,

Appellees and Cross-Appellants,

vs.

ALAMANCE INDUSTRIES, INC., KAYSER ROTH CORPORATION, and KAYSER ROTH HOSIERY COMPANY, INC.,

Appellants and Cross-Appellees.

No. 8371

CROSS-APPEALS FROM *the United States District Court for the Middle District of North Carolina.*

THIS CAUSE *came on to be heard on the record from the United States District Court for the Middle District of North Carolina, and was argued by counsel.*

ON CONSIDERATION WHEREOF, *It is now here ordered, adjudged and decreed by this Court that the decree of the said District Court appealed from, in this cause, be, and the same is hereby,* affirmed, and United States Letters Patent No. 2,841,971 hereby declared invalid and void in—

its entirety, all of which is done upon the grounds set forth in the opinion of this Court this day filed herein and not on the grounds recited in the said decree of the District Court; and that the costs on appeal be paid by the defendants-appellants and cross-appellees.

ALBERT V. BRYAN
United States Circuit Judge.

J. SPENCER BELL
United States Circuit Judge.

J. B. CRAVEN, JR.
United States District Judge.

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FEB 8-1962

R. M. F. WILLIAMS, JR.
CLERK

[SEAL]

A true copy.
Teste.

RICHARD M. F. WILLIAMS, JR.
Clerk, United States Court of Appeals
for the Fourth Circuit.

APPENDIX B

Opinion of the Court of Appeals

TRIUMPH HOSIERY MILLS, INC., Hudson Hosiery Company, Burlington Industries, Inc., Claussner Hosiery Company, and McCallum Hosiery Company, Appellees and Cross-Appellants;

v.

ALAMANCE INDUSTRIES, INC., Kayser-Roth Corporation, and Kayser-Roth Hosiery Company, Inc., Appellants and Cross-Appellees.

No. 8374.

UNITED STATES COURT OF APPEALS

FOURTH CIRCUIT.

Argued Oct. 12, 1961.

Decided Feb. 8, 1962.

Action for a declaratory judgment that Patent No. 2,841,971 for a compressive stocking or a surgical stocking marketed as "Supp-hose" was invalid. The patentees charged the plaintiffs with infringement and unfair competition. The United States District Court for the Middle District of North Carolina, at Greensboro, Johnson J. Hayes, J., 191 F. Supp. 952, determined that the patent was invalid and made alternative rulings, and cross-appeals were taken. The Court of Appeals, Albert V. Bryan, Circuit Judge, held that findings of fraud in obtaining the patent were not supported by the evidence, but that the patent was invalid for want of invention and for impermissively comprehensive claims.

Affirmed.

Simon H. Rifkind, New York City (Jay H. Topkis, New York City, Welch Jordan, Greensboro, N. C., Paul B. Bell, Charlotte, N. C., Paul, Weiss, Rifkind, Wharton & Garrison, John G. Simon, John Lyon, New York City, Eaton, Bell, Hufft & Seltzer, and Charles B. Park, III, Charlotte, N. C., on brief), for appellants and cross-appellees.

John W. Malley, Washington, D. C. (Carl G. Love, C. Willard Hayes and Cushman, Darby & Cushman, Washington, D. C., and Thornton H. Brooks, David Rabin and McLendon, Brim, Holderness & Brooks, Greensboro, N. C., on the brief), for appellees and cross-appellants.

Before BRYAN and BELL, Circuit Judges, and CRAVEN, District Judge.

ALBERT V. BRYAN, Circuit Judge.

A patent for a surgical stocking, marketed as Supp-hose, was attacked in the District Court as fraudulently procured, lacking in inventiveness and as misused. On these grounds a declaratory judgment was sought of its invalidity. Besides denying these charges of the plaintiff non-patentees, the defendant patentees accused them of infringement, asked appropriate enforcement of the patent, and additionally charged the plaintiffs with unfair competition.

The trial judge found a purposeful omission of the patentees to disclose in the patent application a product that will be referred to as the Burlington stocking, which he noted was very similar to the one described in the application and was generally known in the art for several years before the filing of the application. Thereupon he held the patent for naught.

Thoughtfully, to prevent a new trial in the event his determination was not sustained on appeal, he ruled

on the remaining accusations and recriminations in regard to the patent. In this he struck down nine of its claims as wanting in novelty and definiteness. The remaining fifteen claims he thought valid. He found unwitting infringement by the non-patentees of eleven of the claims and acquitted them of unfair competition. But, in the end, he concluded that the patent had been rendered unenforceable by the excessive and unlawful restraint imposed by the patentees in a license of it.

The initial appeal is by the defendant patentees against the finding of fraud in the procurement of the patent and the alternate determination of misuse. They do not ask review of the dismissal of the claim of unfair competition. Cross-appealing, the plaintiff non-patentees pray the vacation of the alternate findings of validity and infringement.

The plaintiffs are Triumph Hosiery Mills, Inc., Hudson Hosiery Company, Burlington Industries, Inc., Claussner Hosiery Company and McCallum Hosiery Company. McCallum is a division of Claussner. These are the non-patentees; they are engaged in the manufacture and sale, among other things, of ladies nylon hosiery.

The patent in suit, No. 2,841,971, was issued July 8, 1958 on an application filed August 19, 1957 by Joseph H. Bird, Marvin H. Comer, Charlie A. Miles, and Ralph C. Braxton. The application and patent were assigned to the defendant Alamance Industries, Inc., a corporation engaged in acquiring, holding and licensing inventions and patents obtained from the defendant Kayser-Roth Corporation and others. Defendant Kayser-Roth Hosiery Company, Inc. operates as a division of Kayser-Roth Corporation, both manufacturing and selling hosiery. The three defendants we call the patentees.

"Compressive Stocking"—the title of the patent—is an explicit description of the article constituting the centerpiece of this litigation. The Bird patent strove to perfect a woman's stocking which would be therapeutically successful in compressing the leg of the wearer and at the same time offer a fashionable appearance. Since before August 1955 Burlington had made and sold a ladies' hosiery that it now asserts to be a compressive stocking with properties like those specified and claimed in the Bird patent. Thus, strife between the Burlington and Bird merchandise lies at the heart of this litigation.

Apparently for many years the market had been demanding and research had been seeking a surgical-type stocking for women affording therapeutic attributes, but which would be at the same time sheer, and otherwise attractive. The therapy was directed to the relief of vascular ailments and fatigue of the leg. The most effective surgical stockings in use relied upon the elasticity of rubber yarns to give the necessary repressive force. But they were neither popular nor practicable because the rubber made them heavy, thick and hot; they were expensive, unattractive and did not launder readily. See Johnson & Johnson v. Carolina Lee Knitting Co., 258 F. 2d 593 (4 Cir. 1958).

The rival stockings in this suit were all full-fashioned and of unplied yarn. Burlington's were of three types. The first was knit with a single thread or "end" of monofilament nylon yarn, in alternating courses or loops, having fifteen turns of twist per inch in one direction to impart torque, the intervening courses being of the same yarn and turns but with the turns in an opposite twist. The second was similar to the first save that two ends of unplied yarn were used in each course. The third was like the other two but every course had three ends. Each of these styles was knit

in a two-carrier system on the usual full-fashioned knitting machine. Prior to October 1955 the nylon monofilament torque yarn used was fifteen denier and heat-set. The patentees were aware of all of the contemporary and earlier stockings made by Burlington when they filed the application for the Bird patent.

A description of the Bird stocking is given in the fact findings of the District Court as follows:

> "7. The Bird patent specifications and claims disclose a full fashioned knit ladies' nylon stocking having three or more unplied monofilament nylon yarn ends of false twist spindle processed yarn wherein at least three ends of the false twist yarn of the same rotational direction are knit in some courses of the knitted fabric, and three ends or more of the opposite rotational direction are knit in other courses of the knitted fabric, forming alternatively distorted loop stitches throughout the stocking. The knitted fabric forming the stocking is described as providing high compressive support for the leg of a wearer."

Actually, the patent was broader, specifying and claiming a stocking with "multiple" or a "plurality" of ends, which would include two ends.

I. Concededly, the Burlington stocking was the closest of all the prior products to the Bird stocking. However, it was not listed or cited in the patent application. The District Judge found that the applicants at no time brought the Burlington three-end 15 denier stocking to the attention of the United States Patent Office or its Examiner. This omission he found intentional. It was in his judgment a deliberate withholding of information in order to deceive the Patent

Office. He further concluded that the claims of the patent would not have been allowed if the Burlington stocking had been brought to the attention of the Patent Office.

The Court heard and weighed the evidence sedulously, evincing a comprehensive knowledge of the proof and a firm grasp of the legal principles it invoked. But we cannot agree that the evidence adduced meets the required standard of a "clear and definite" showing of fraud. Armour & Co. v. Wilson & Co., 274 F.2d 143, 148 (7 Cir. 1960). Indeed, an analysis of the testimony precludes, we think, the suggestion of fraud.

To begin with, the sole witness testifying on whether or not before the patent was issued the Patent Office was apprised of the Burlington three-end 15 denier garment, was positive that it had been. Time, place and occasion were given specifically and without contradiction. This witness stated that the disclosure was made by one of the patentees' present trial counsel. Although the lawyer asked to testify to the point, the Court felt it should not hear him as his name had not been included in the advance listing of witnesses required by the pre-trial order. His offer to withdraw from the trial was rejected as coming too late, on the ground that he must have known before or at the start of the trial that this issue, on which his testimony was critical, would enter the case.

These reasons, we think, were outweighed by the right of the attorney to be heard. Especially is this so in view of the gravity of the accusation lodged against him and his clients.

Further, ignorance of the Examiner or the Patent Office of the existence of the Burlington stocking is not readily conceivable. Without question the patentees and their attorney had alluded to equivalent prior art in such patents as Neumager, No. 2,641,914; Tait, No. 2,636,369; and Weller, No.

2,755,616. Tait taught the use of three ends and Tait with Weller a stretch stocking. Incidentally, the Examiner on the Bird patent was the same person who had heard the Tait and Weller applications. Hence, he was familiar with the concept of plural ends composed of monofilament yarns knitted into a stretchable fabric, with the threads twisted to impart torque. Consequently, whether or not the applicants or their attorney specifically directed the Examiner to the Burlington article, the elements of its construction were generally known to him. The District Court might (and did) disagree with the Examiner as to the impact of the prior art on the Bird patent, but this is not tantamount to a finding of misconduct.

II. But the entire patent is invalid, in our opinion, for want of invention. At the same time it offends, by the breadth of its claims, the very plan and purpose of the patent law. We have no reason, therefore, to consider the alleged misuse of the patent or its infringement.

Claims 1 through 7 were adjudged by the District Court to be lacking in definiteness and anticipated by Burlington's three-end 15 denier stocking. The District Judge also found indefiniteness in Claims 19 and 20 and on that ground invalidated them too. He upheld Claims 8 to 18 inclusive and 20 to 23 inclusive as definite and valid. We can accept his subsidiary findings of fact without agreeing with his ultimate conclusion, whether it be one of fact or law, that the patent is valid in part. We do not see novelty in any of the claims and, taken together, we think they are impermissibly comprehensive.

The District Judge found Bird's not to be a primary patent or a pioneer in the field, but only a "secondary" patent, that is, one built upon antecedent prototypes. He allowed

the patent on the "narrow basis" of a novelty he thought resided in its highly repressive force.

The specifications of the patent describe its product as "a knit stretchable and retractable garment fabric, particularly hosiery, the stitch loops of which are knit of *multiple monofilament synthetic* torque yarns to form a stocking which has sufficient compressive or binding force on the leg to be of therapeutic value to the wearer." (Emphasis added.) The specifications candidly disclose, too, that stockings of stretchable and retractable fabric had been long and well known to the art. They suggest that the difference between the Bird stocking and its nylon yarn predecessors lies in the latter's attainment of a vastly superior compressive force. In prefatory paragraphs it is explained:

> "Heretofore, stockings having a satisfactory high compressive or binding force on the leg of the wearer have depended upon the inherent elasticity in the yarn or thread of which the stockings were knit. Some of these so-called 'surgical' stockings have been knit throughout with an elastic (rubber), or elastic covered yarn, alone or in combination with plain yarn or crimped or curled synthetic stretch yarn. While some of these prior types of elastic stockings provide sufficient compressive force on the leg of the wearer, they are not as attractive as conventional monofilament stockings. Also, the prior elastic stockings which utilize rubber threads cause some people to have skin reactions and such stockings rapidly deteriorate with age and washings. Stockings made of crimped or curled synthetic stretch yarn do not have enough compressive force to be of any appreciable therapeutic value.
>
> "Other types of stretchable and retractable stockings are currently being produced from various types of curled, crimped or *torque nylon yarns*, but such

> stockings are produced to fit a wide range of leg and foot sizes without any intention of compressing or binding the leg.
>
> * * *
>
> "The compressive stocking of the present invention differs from prior stretchable stockings knit with crimped or torque yarns, since the stocking of the present invention has a high resistance to stretch and, therefore, a strong tendency to return to its normal relaxed position. The present compressive stockings are of particular therapeutic value to persons suffering from pathological conditions in the vascular system of the legs, such as often occur during pregnancy." (Emphasis added.)

Manifestly, the prior types did not give "enough" compressiveness; but the patent fabric does give "sufficient" compression to be of "appreciable therapeutic value". This added force is developed by the combination of previously known elements to produce this more effective result. The high-torque yarn for this stretchable and retractable stocking is produced by established methods, according to the specifications, "one of which is by a * * * false twisting operation * * * with the first twist being heat-set. * * *". Another, "Torque may also be imparted to the yarn by conventional and other equipment". The specifications further reveal that the yarn preferably used in the subject stocking is treated in the former manner. While the evidence in the trial emphasized that the temperature and duration of the heat were critical variants from the previously known process, these two factors are not disclosed in the patent. "The compressive stocking of the present invention" the specifications continue, "is preferably knit on a full-fashioned hosiery knitting machine by the well known carrier system.

> "By using plural unplied high torque yarns of the same torque direction in each course with each of said yarns being free and movable independently of the other, greater compression is obtained. * * * This combined torque reaction results in a highly compressive fabric heretofore unattainable without the use of rubber yarns."

As we have seen, the Tait and Weller patents had taught the adaptation of multiple ends, consisting of monofilament yarns twisted to make them lively. The Burlington product had for several years preceding the Bird application included alternating courses of yarn of one twist and intervening courses of an opposite twist, and was heat-set.

As to compression, the patentees' own test charts attribute some measure of this desired property to prior art stockings, particularly the three-end 15 denier Burlington stocking. There was expert testimony by one of Burlington's witnesses that these stockings had therapeutic advantages. An initial decision by Burlington not to attempt to go further and achieve a result equivalent to patentees' Supp-hose was, as we read the findings of the District Judge, born of a fear that the result would not justify in sales a redesign of the stocking; not that it would lack compressiveness. This initial decision was later overruled, and the improvements were adopted.

Thus, it appears that the Bird stocking was no more than a reinforcement of the old. There was nothing original in it. It was but an extension of old ideas.

The patent cannot stand on the ground that it adopted a measure of strength beyond the prior art and thereby gained invention. In this the patent is merely meeting the test of criticality. But criticality is not invention. It is ably explained in Helene Curtis Industries, Inc. v. Sales Affiliates, Inc., 233 F.2d 148, 152 (2 Cir. 1955) as follows:

> "* * * the mere location of the optimum conditions of use for a known composition of matter does not constitute 'invention' so as entitle the discoverer thereof to a monopoly. That objective, however useful the final result, can be achieved by 'patient experiment', *, * * no inventive genius is necessary."

"It is well settled that a patent cannot be properly granted for the discovery of a result which would flow naturally from the teaching of the prior art." In re Adams, 284 F.2d 525, 527 (CCPA 1960). See also in re Pomeroy, 64 F. 2d 681, 683, 20 CCPA 1026 (1933), where it is said, "It properly may be remarked that generally there is no invention in making a device strong enough to perform the function for which it is designed; that is, there is no invention in merely producing strength. We must look to the structure which produces it and determine whether invention lies there."

This principle is again aptly stated in Smith v. Nichols, 21 Wall. 112, 119, 88 U. S. 112, 119, 22 L.Ed. 566 (1875) in discussing a patent relating to elastic woven fabric:

> "But a mere carrying forward of new or more extended application of the original thought, a change only in form, proportions, or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent."

More pertinently, the Court had just said of the patent there involved:

> "The evidence before us leaves to the complainant none of the particulars claimed as of his invention, except perhaps greater tightness of the weaving, a firmer grasping of the elastic cords by the weft threads half round above and below, and greater beauty and value of the fabric."

This single virtue was held to be no manifestation of invention.

True, a combination of old elements may be patentable if they "perform or produce a new, different or additional function or operation * * * than that theretofore performed or produced by them." Sobeloff, C. J. in Entron of Maryland, Inc. v. Jerrold Electronics Corp., 295 F.2d 670 (4 Cir. 1961). See also, O. M. I. Corp. of America v. Kelsh Instrument Co., 279 F.2d 579, 584 (4 Cir. 1960). However, no new function has been produced by the Bird patent, for confessedly the prior art had embraced yarn support-type stockings with some compression. Bird added nothing in "function or operation"; it merely augmented the force of features already existent in earlier stockings.

Moreover, the improvement in the stocking was a step obvious to one familiar with the need and method of manufacture. The District Judge's findings make this altogether clear:

> "31. It was obvious to one having ordinary skill in this industry to improve the support characteristics of all nylon stretch monofilament stockings by making them heavier or tighter by such obvious expedients as increasing the total denier, by adding additional ends of yarn in each course, or by increasing the denier of the individual yarns, or by adding additional narrowings. * * *
>
> "32. It was obvious to one having ordinary skill in the art of knitting full-fashioned hosiery that to decrease the width of the fabric additional narrowings are to be added, resulting in a tighter fitting stocking for the same volume leg.
>
> "33. It was obvious to one having ordinary skill in the art of knitting full-fashioned hosiery that by progressing from one end to two ends in a stock-

ing greater power for support would be obtained. And going from two ends to three ends more power would be obtained, and going from three ends to four ends even more power would be obtained.

"35. It was known in 1955 and was obvious to produce high torque heat set nylon monofilament yarns, with from 10 to 50 turns, for knitting ladies stockings to impart stretchable properties."

The record contains the frank testimony of three of the four inventors to the obviousness of the patented process. They stated that the addition of denier and ends would be an obvious way to increase the force and gripping power of the stocking.

On this score alone the Bird stocking is declared unpatentable by statute. 35 U.S.C. § 103 providing that "A patent may not be obtained * * * if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

In their briefs the sponsors do not rest the patent on the number of ends of the denier in its product. They assert, and the trial court has found, inventiveness in the compression obtained with an all-yarn thread—a pressure not before achieved by any such stocking. To the argument of earlier knowledge and use in the art, and of the obviousness of the improvement, they reply that the patent made the "break through" from rubber to whole yarn for a surgical support stocking. Citing their Supp-hose, they proclaim it succeeded where others failed; it achieved notable commercial success and has the sincere flattery of industrial imitation.

But these contentions admitted, they do not establish patentability. Noteworthy, the patentees do not pinpoint the inventiveness. However significant and true, their assertions for the patent do not turn the old into the new, the obvious into the ingenious.

Utility is mistaken in these arguments for novelty. Utility alone is not patentable. As said in McClain v. Ortmayer, 141 U.S. 419, 429, 12 S.Ct. 76, 79, 35 L.Ed. 800 (1891): "While * * * in a doubtful case the fact that a patented article had gone into general use is evidence of its utility, it is not conclusive even of that—, much less of its patentable novelty." Toledo Pressed Steel Co. v. Standard Parts, Inc., 307 U.S. 350, 356, 59 S.Ct. 897, 900, 83 L.Ed. 1334 (1939) declares that, "* * * similarly without significance on the question of novelty is the fact that, as plaintiff claims, utility resulted and commercial success followed from what patentees did."

In Great A. & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 153, 71 S.Ct. 127, 130, 95 L.Ed. 162 (1950) Justice Jackson also wrote:

> "The Court of Appeals and the respondent both lean heavily on evidence that this device filled a long-felt want and has enjoyed commercial success. But commercial success without invention will not make patentability."

Justice Douglas concurring added, with Justice Black's agreement,

> "The standard of patentability is a constitutional standard; and the question of the validity of a patent is a question of law. * * * No 'finding of fact' can be a substitute for it in any case." 340 U.S. 154, 156, 71 S.Ct. 132.

We cite these two cases only to the point of the weight to be accorded the factor of utility. They both mention the "flash of genius" or "inventive genius" test, and we are aware that there is some question as to the validity of this test in view of the insertion of 35 U.S.C. § 103 by the 1952 amendment. See Refiner v. I. Leon Co., 285 F.2d 501 (2 Cir. 1960); Fairchild v. Poe, 259 F.2d 329 (5 Cir. 1958); Fisch v. Gould, 240 F.2d 5 (3 Cir. 1957); Fowler v. Vimcar Sales Co., 216 F.2d 263, 265 (9 Cir. 1954); 2 U.S. Cong. & Admin. News 1952 at 2399, 2411. We are not now called upon to take a position on this question.

While the commercial success of Supphose is impressive, it is subject to close scrutiny. Again in McClain v. Ortmayer, supra, 141 U.S. at 428, 12 S.Ct. at 79, the Court admonished:

> "That the extent to which a patented device has gone into use is an unsafe criterion even of its actual utility, is evident from the fact that the general introduction of manufactured articles is as often effected by extensive and judicious advertising, activity in putting the goods upon the market, and large commissions to dealers, as by the intrinsic merit of the articles themselves. The popularity of a proprietary medicine, for instance, would be an unsafe criterion of its real value, since it is a notorious fact that the extent to which such preparations are sold is very largely dependent upon the liberality with which they are advertised, and the attractive manner in which they are put up and exposed to the eye of the purchaser. * * *"

Nor is the Bird Patent saved by the statutory presumption arising from the patent itself, 35 U.S.C. § 282. This presumptive validity is but prima facie. Chesapeake & Ohio

Ry. Co. v. Kaltenbach, 95 F.2d 801 (4 Cir. 1938). It is readily seen that in assessing the prior art, the Patent Examiner failed to accord proper significance to the Burlington and previous developments. But his omission aside, the evidence generally rebuts the presumption, for a generous preponderance of the evidence proves the want of either originality or ingenuity. Indeed, it can be said, if necessary, that the proof on this head goes beyond a reasonable doubt. Evidence of such stature in respect to novelty and invention warrants, further, the conclusion in law that the presumption has been overborne and the patent invalid.' Blish, Mize & Silliman Hardware Co. v. Time Saver Tools, 236 F.2d 913, 916 (10 Cir. 1956)."

The invalidation of the patent is further proclaimed, and with the most emphasis, by the patent's impermissible reach. Its claims cover a stocking of multiple or a plurality of ends—no less than two, but more without limit.

The claims would encompass as stocking of any number of ends exceeding one; they would certainly question any stocking made of unplied monofilament torque yarn providing a compression greater than the pressures shown in Table 1 of the specifications. In fact, some of the claims are not dependent upon any specified compressiveness whatsoever. For example, the first seven claims give no pressures at all, while Nos. 17, 18, 19 and 20 call for a "sufficient" or "therapeutic" support.

The uncertainties and confusion arising from such a patent would be intolerable. Infringement would be difficult to judge, for just when the patentee's manufacture was within or without the patent would not be readily apparent to a competitor. The patent would seem to embrace a therapeutic unplied monofilament torque nylon stocking with a compression even below the minimum pressures given in

some of the claims and in the first table of the specifications. For a surety, it encompasses without ceiling all of this type of stocking having a compressiveness above these measurements. The result would be to discourage a competitor, through fear of suit, to put on the market any such stocking with a plurality of ends whatever its compression. A vast and unwarranted field is thus usurped by the patent.

This expanse of monopoly, with the *in terrorem* effect upon competitors already mentioned, does not "promote the Progress of Science and useful Arts." Art. I, Section 8 of the Constitution. We think the patent is violative of the purpose and plan of the Constitution and statutes, 35 U.S.C. § 100 et seq., in granting letters patent. The harm is denied and decried in Atlantic Works v. Brady, 107 U.S. 192, 200, 2 S. Ct. 225, 231, 27 L. Ed. 438 (1883), Justice Bradley saying, "To grant a single party a monopoly of every slight advance made, except where the exercise of invention somewhat above ordinary mechanical or engineering skill is distinctly shown, is unjust in principle and injurious in its consequences." He goes on, "It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to lawsuits and vexatious accountings for profits made in good faith."

As we reach the same end as did the District Judge in respect to the patent, and as we agree with his disallowance of any counsel fees, we will affirm the judgment of the District Court, with costs to be recovered by the non-patentees.

Affirmed.

APPENDIX C

Opinion of the District Court.

TRIUMPH HOSIERY MILLS, INC., Hudson Hosiery Company, Burlington Industries, Inc., Chesnee Hosiery Company, and McCallum Hosiery Company, Plaintiffs

v.

ALAMANCE INDUSTRIES, INC., Kayser Roth Corporation and Kayser Roth Hosiery Company, Inc., Defendants

No. C-232 G-58.

UNITED STATES DISTRICT COURT

M. D. NORTH CAROLINA.

Greensboro Division.

Feb. 10, 1961.

A suit was brought for declaratory judgment that Patent No. 2,841,971 for a compressive stocking is invalid and noninfringed, and to restrain the defendants from interfering with the plaintiffs in the manufacture of their stockings or with their customers, and the defendants filed a counterclaim against certain of the plaintiffs. The District Court, Hayes, J., held that the patent was invalid because of the willful concealment of vital information from the Patent Office.

Judgment in accordance with opinion.

John W. Mabry, Jr., and Carl G. Love, Washington, D. C., Thornton H. Brooks and David Ralph, of Greensboro, N. C., for plaintiffs.

Basil B. Bell and Charles B. Park, III, Charlotte, N. C., and Welch G. Jordan, Greensboro, N. C., for defendants

Opinion of the District Court

HAYES, District Judge.

The plaintiffs instituted this suit for a declaratory judgment praying for a decree that Patent No. 2,841,971 to Joseph J. Bird, et al. on a compressive stocking be declared invalid and non-infringed, and that the plaintiffs have a decree against the defendants from interfering with the plaintiffs in the manufacture of their stockings or their customers who sell them. The defendants in answering alleged the validity of the patent, accused each of the plaintiffs with infringing the patent, asked for an accounting, and in their counterclaim the defendants set up another cause of action against Burlington and Claussner-McCallum, alleging unfair trade practices and praying damages therefor.

The application for the Bird Patent was filed on August 19, 1957, and the patent issued July 8, 1958. There was no interference filed against the issuance of the patent and on motion of the patentees, action on the application was advanced, and upon consideration of the same the Examiner rejected all claims of the patent on March 12, 1958. The patentees made substantial amendments April 2, 1958, May 5, 1958, and May 8, 1958, which resulted in the allowance of Claims Nos. 18, 20, 21, 22, 23 and 24.

The object of the invention was to provide an all-nylon stocking which would serve the purpose of the surgical stockings which were well known and which had been marketed for years. But it was desirable to produce a stocking without the objections which had arisen to the surgical stockings. They were made of rubber and sold in drug stores and special stores, ordinarily when prescribed by the medical profession, especially in cases of severe varicose veins. An improvement over the rubber stocking occurred

in a patent issued to Purcell on March 1, 1955.[1] It was thought in that case that the Purcell patent taught how to make a stocking of the surgical type by utilizing a strand of rubber covered with nylon and a strand of helenca (nylon crimped and heat-set), thereby adding to the beauty of the stocking by giving it a sheer appearance and overcoming the objections to the unsightly appearance of the all-rubber surgical stocking.

Neumager in Patent No. 2,641,914, dated June 16, 1953, taught the use of helenca alone for making the stocking. While this stocking afforded the expansion, it was weak in retraction. The Purcell Patent failed to absorb the demand for this type of stocking. By reason of the state of the art, as disclosed by the patents herein referred to, the patent to Bird is at most an improvement over the state of the art rather than a pioneer patent in its field. While the Bird Patent is entitled "Compressive Stocking," this invention relates to a knit stretchable and retractable garment fabric, particularly hosiery, the stitch loops of which are knit of multiple monofilament synthetic torque yarns to form a stocking which has sufficient compressive or binding force on the leg to be of therapeutic value to the wearer.

In describing the invention and the state of the art, it is said: "Stockings having a satisfactory high compressive or binding force on the leg of the wearer have depended upon the inherent elasticity in the yarn or thread of which the stockings were knit. Some of these so-called 'surgical' stockings have been knit throughout with an elastic (rubber), or elastic covered yarn, alone or in combination with plain yarn or crimped or curled synthetic stretch yarn.

1. Johnson & Johnson [and Purcell] v. Carolina Lee Knitting Co., 155 F.Supp. 414, Id., 4 Cir., 258 F.2d 593, re-hearing 173 F.Supp. 73, affirmed 4 Cir., 1960, 275 F.2d 91.

While some of these prior types of elastic stockings provide sufficient compressive force on the leg of the wearer, they are not as attractive as conventional monofilament stockings. Also, the prior elastic stockings which utilize rubber threads cause some people to have skin reactions and such stockings rapidly deteriorate with age and washings. Stockings made of crimped or curled synthetic stretch yarn do not have enough compressive force to be of any appreciable therapeutic value.

"Other types of stretchable and retractable stockings are currently being produced from various types of curled, crimped or torque nylon yarns, but such stockings are produced to fit a wide range of leg and foot sizes without any intention of compressing or binding the leg. Such stockings have a great amount of stretchability and are relatively easy to stretch so that the hose will not bind the leg of the wearer but will merely fit snugly.

"The compressive stocking of the present invention differs from prior stretchable stockings knit with crimped or torque yarns, since the stocking of the present invention has a high resistance to stretch and, therefore, a strong tendency to return to its normal relaxed position. The present compressive stockings are of particular therapeutic value to persons suffering from pathological conditions in the vascular system of the legs such as often occur during pregnancy.

"It is the primary object of this invention to provide a highly compressive stocking, the stitch loops of which are knit of a plurality of inherently inelastic synthetic yarns, each of which has been twisted to impart high torque thereto. The torque yarns in the stitched loops cause the loops to deform or incline when the stocking is relaxed and when

stretched the stitch loops will straighten. The use of multiple high torque yarns in the stitch loops will multiply the resistance of the deformed stitch loops to straighten and produce a stocking which has a high resistance to stretch and, therefore, a strong tendency to return to its normally relaxed or unstretched condition resulting in a much higher degree of compression, constrictive or binding force on the leg of the wearer than has heretofore been obtained with torque yarns."

Burlington had been making a similar stocking and it had been sold over the United States extensively for more than a year before the application for the Bird Patent was filed. This Burlington stocking was constructed with three strands of 15 denier torque nylon yarn on conventional machines and in the conventional loops which was stretchable and retractable, but this was nowhere cited in the application nor in the subsequent presentation before the Examiner in the Patent Office and this has an important bearing on the whole subject matter of this litigation. In the footnote below,[2] a proper understanding of the problem

[2]

Bird Patent	Stipulated Facts of Burlington
Filed August [illegible], 1957	Style 904, Sold in 1955
In knitting the stocking blank a standard full-fashioned knitting machine is used.	13.d. The Burlington stockings described in 13.c. were knit using the two carrier system on a conventional full fashioned knitting machine.
—Col. 3, line 44-5.	
The boot of Leg 12 of the blank is made with one carrier, feeding the Z torque yarns, making two courses, and	Three-end stockings were knit using three implied ends of "S" twist heat-set torque monofilament nylon yarns fed through one carrier to knit two courses in the fabric and
The other carrier, feeding the S torque yarns, making the next two courses and alternating throughout the length of the remainder of the stocking blank.	Three implied ends of "Z" twist heat-set torque monofilament yarns were fed through the other
—Col. 3, lines 66-70.	

is set forth in parallel columns. The left column describes the Bird Patent while the right column stipulates the Burlington stocking.

The conduct of the patentees with respect to the Burlington stocking constitutes one of the main arguments of the plaintiffs for declaring the patent invalid. While other prior art is pleaded, and prior publications, the plaintiffs have relied on the Burlington stocking as constituting the best prior art. Although the file record discloses a rejection by the Patent Examiner of all the claims as being unpatentable over Weller No. 2,755,016, in view of Tait, No. 2,630,369, who shows that it is old to knit a plurality of monofilament into a stocking. Weller knits alternating courses of opposite torque so as to produce a balanced fabric. It was held "obvious that one skilled in the art desiring to produce a fabric with a greater resistance to stretch,

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By using plural unplied high torque yarns of the same torque direction in each course with each of said yarns being free and movable independently of the other, greater compression is obtained due to the combined independent action of each yarn tending to distort the fabric loops and draw up the stocking. This combined torque reaction results in a highly compressive fabric heretofore unobtainable without the use of rubber yarns.

—Col. 3, lines 10-17.

It is thus seen that we have provided a highly compressive stocking, utilizing no rubber, by knitting a plurality of, at least three, independent high torque yarns in each loop of the knitting stocking.

—Col. 6, lines 57-60.

carrier to knit two courses in the fabric.

The sequence of alternation of yarn carriers was carried out for the knitting of the boot of the stocking.

13c. The three-end full-fashioned stockings were made of three ends of torque 15 Denier monofilament nylon yarns, three ends each having 15 turns per inch of "S" twist unplied in alternate courses and three ends each having 15 turns per inch of "Z" twist unplied in intervening courses. This stocking was, and is, Burlington, Style No. 964. Burlington commenced the manufacture and sale of these stockings in June, 1955.

would realize that this would be obtained by using a plurality of filaments in lieu of a monofilament. Hence it would not be inventive to knit a plurality over monofilament in each course of Weller since this is shown to be old in Tait and the results obtained therefrom would be obvious and expected."

On April 3, 1958, substantial amendments were made to the claims to which Neumager No. 2,641,914 was made reference. The method claims were rejected as were Claims 22 through 24 as being unpatentable over Weller in view of Tait. On May 5, 1958, further amendments were filed of a substantial nature, resulting in new Claims 21, 22, 23 and 24. Again amendments were made on May 8, 1958, for the purpose of pointing up and defining the invention and particularly to specify the plurality of independent torque yarns, at which time the patentees and their attorney appeared before the Examiner for the purpose of demonstrating their invention over the prior art, including the Knohl Patent No. 2,832,125. Braxton and Comer, two of the patentees, with their attorney, appeared before the Examiner for the purpose of demonstrating their invention over the prior art, and at which time the claims were made more definite by the addition of "there being at least three yarns in some courses for a torque in one direction and at least three yarns in other courses for a torque in opposite directions," in Claims 8, 9, 10, 11, and the same clause, except "four" was substituted for "three" was added to Claims 12, 13, 14, 15 and 17. In this connection, the file record excludes any reference whatever to the Burlington stocking having been brought before the Examiner, and yet the Burlington stocking in its structure and result read more nearly on the Bird patent than any of the references or structures

demonstrated before the Examiner. This was not omitted by inadvertence or neglect. Its omission was deliberate and resulted in the concealment from the Examiner of facts definitely known to the patentees because Bird on March 31, 1958, wrote the patent attorney:

> "It is suggested that we list four ends of 15 denier monofilament yarns in each loop as being the minimum and not set up a definite maximum * * *. The consideration for specifying a minimum of four ends is on the basis that Burlington and others have been making a service-weight stocking under the Patentex Chadolon Patent and to make our claims identifiable we should specify more than three ends. Otherwise there could be the question that Burlington and others had been making a stretch stocking with three ends of yarn which would serve the same purpose."

There is no doubt in my mind that the claims would not have been allowed over the Burlington stocking if the patentees had performed their duty of making a true presentation of the state of the art at the time of the demonstration. Having demonstrated the weakness of the one strand method and the two strand method over their four strand on which they sought the patent, there is no other conclusion to reach than that they deliberately omitted demonstrating the Burlington stocking with full knowledge that it constituted the present prior art over the stocking on which they sought their patent. This conclusion is buttressed by the fact that the amendments to their claims, which have been referred to above, indicate that they knew of the significance of three strands and four strands in connection with their invention. In Armour & Company v.

Wilson & Company, D.C., 168 F.Supp. 353, 359, the court held:

> "The Thompson patent was secured after furnishing the Patent Office with false and misleading evidence and statements, and this invalidates the Thompson patent. Precision Instrument Mfg. Co. v. Automotive Maintenance Machinery Co., 1945, 324 U.S. 806, 816, 818 [65 S.Ct. 993], 89 L.Ed. 1381, 1387, 1388, [65 USPQ 133, 138-139]; Hazel Atlas Glass Co. v. Hartford Empire Co., 1944, 322 U.S. 238 [64 S.Ct. 997], 88 L.Ed. 1250, [61 USPQ 241]; Keystone Driller Co. v. General Excavator Co., 1933, 290 U.S. 240 [54 S.Ct. 146], 78 L.Ed. 293, [49 USPQ 228.] Floridin [Co.] v. Attapulgus Clay Co., D.C.D. Del. 1940, 35 F.Supp. 810, 814, [47 USPQ 332, 336]."

In view of the three weeks consumed in hearing the testimony and argument in the case, the court will consider other aspects and issues which have arisen. In the event that the invalidity of the Bird patent is not sustained on the basis of willful withholding from the Patent Office vital information on the invention and misjudging the knowledge of the art at the time, we pass to the question of the patent itself as well as the validity of the claims and the matter of infringement.

The patent is confined to a specific product and if limited to its proper definitions embodies a structure not then known and is an improvement over the structure theretofore produced. The novelty, if any, resides in a structure of highly repressive force, demonstrated in the patent as "compressive," which possesses substantially more resistance to stretch and greater power of restriction or compression than

any of the structures heretofore made without elastic. If interpreted in the light of its specifications and Charts I, II and III, illustrating the same, the stocking, in order to comply with the invention, is required to achieve the force of restriction demonstrated in Chart I. The stockings made and sold by defendants since the fall of 1957 have been made in accordance therewith and have been given widespread approval both by the consuming public and by the medical profession who have recommended its use in preference to the elastic stocking. It was marketed by Kayser-Roth under the trademark "Supp-hose" and designated as a "Support Stocking". It distinctly differed from a rubber stocking in that rubber after being stretched snaps back, whereas the nylon stocking constituting the invention was stretchable and retractable by virtue of the torque in the yarns and in the loops, thereby importing a liveliness thereto which caused the stocking to retract with force or compression. Its novelty over the Burlington stocking resides in its excess of repressive force which arises by the use of four ends of 15 denier, giving a total of 60 denier, which until their invention was deemed impractical, unsatisfactory and too heavy to be accepted by the consumers. In addition to the statutory presumption of validity, 35 U.S.C. § 282, which was enacted after Mumm v. Jacob E. Decker & Sons, 301 U.S. 168, 57 S.Ct. 675, 81 L.Ed. 983, the importance of which statute is considered in Georgia-Pacific Corp. v. United States Plywood Corp., 2 Cir., 258 F.2d 124, the patent in suit meets other tests by:

(1) It solved a long existing problem and filled a long-felt need. Baker Cammack Hosiery Mills et al. v. Davis Co., 4 Cir., 181 F.2d 550.

(2) The substantial commercial success enjoyed by the "Supp-hose" Compressive Stocking attests its merits. Baker-Cammack Hosiery Mills et al. v. Davis Co., supra; City of Grafton W. Va. v. Otis Elevator Co., 4 Cir., 100 F.2d 816; Kress & Co. v. Aghnides, 4 Cir., 240 F.2d 718.

(3) Royalties paid by others in the field, to-wit, $700,000 a year in foreign licenses and $400,000 a year by Hanes Hosiery.

(4) The imitation by the competitors of the Bird stocking. It is significant that although the plaintiff had rejected such a stocking before the Bird patent that promptly thereafter they resorted to the manufacture of a stocking comparable to weight composed of either four ends 15 denier or three ends 20 denier which served substantially the same function of the stocking described in the patent. It was said in Kurtz v. Belle Hat Lining Co., 2 Cir., 280 F. 277, 281:

> "The imitation of a thing patented by a defendant, who denies invention, has often been regarded, perhaps especially in this circuit, as conclusive evidence of what the defendant thinks of the patent, and persuasive of what the rest of the world ought to think."

This principle is supported in Black & Decker Manufacturing Co. v. Baltimore Truck Tire Service Corp., 4 Cir., 40 F.2d 910; Ackermans v. General Motors Corp., 4 Cir., 202 F.2d 642, and Saco-Lowell Shops v. Reynolds, 4 Cir., 141 F.2d 587, 590. It is contended by the plaintiffs that the advance in the patented stocking over the prior art was a mere matter of degree obvious to one skilled in the art and not patentable. But this argument is not impressive nor in accord with Stedman Mfg. Co. v. Redman, 4 Cir., 257 F.

2d 867; O. M. I. Corp. of America v. Kelsh-Instrument Co., Inc., 4 Cir., 279 F.2d 579 and Diamond Rubber Company of New York v. Consolidated Rubber Tire Company, 220 U. S. 428, 31 S.Ct. 444, 55 L.Ed. 527. It is noteworthy that Burlington ceased production of its three-end stocking during 1957, but revised it in 1958, and in 1959, after this suit had been instituted, it began the production of three-end 20 denier. This is rather significant, as pointed out in this circuit in Procter & Gamble Mfg. Co. v. Refining, Inc., 4 Cir., 135 F.2d 900.

Defendants concede that the Burlington three-end 15 denier stocking does not infringe the Bird patent. This is not any generosity on their part. It is rather a concession necessary to avoid invalidating the patent on account of prior art and to afford a semblance of excuse for failure to bring it to the attention of the Patent Office.

Claims 1 through 7 are held invalid for lack of definiteness and anticipated by Burlington's three-end 15 denier stocking. Claims 8 and 12, directed to the knee portion of the stocking, Claims 9 and 13, directed to the ankle portion, Claims 10 and 14, directed to the instep portion, and Claims 11 and 15, directed to the foot portion, are sufficiently specific and are held valid. Claims 16, 17 and 18 are held sufficiently definite and valid. Claims 19 and 20 are held invalid for indefiniteness. Claims 21, 22, 23 and 24 are held sufficiently definite and valid.

In holding the claims above valid, the court became constrained to do so on the basis of the specific improvement in the production of the desired stocking over the prior art and made according to the specifications and limited to the precise form and elements to produce the highly compressed stocking. In holding the claims valid, the court arrived at the difficult determination on the narrow basis that the

patented stocking was a valuable improvement over the prior art, if strictly construed according to the definitions set forth in the claims which have been held valid. Stockings made of a less specified standard and possessing less highly compressive force would not be construed to come within the terms of the claim. It is not such a pioneer in its field that others making stockings of a lower degree of compression would have to pay tribute and for this reason should be classified as a secondary invention. Diamond Rubber Co. of New York v. Consolidated Rubber Tire Company, 220 U. S. 428, 435, 31 S.Ct. 444, 55 L.Ed. 527; Lever Bros. Co. v. Procter & Gamble Mfg. Co., 4 Cir., 130 F.2d 633; Hutzler Bros. Co. v. Sales Affiliates, Inc., 4 Cir., 164 F.2d 260.

It is settled principle of patent law that the invention is measured in terms of the claims, but that the claims "are to be read, interpreted and applied in light of the specifications which may not enlarge a claim but which may explain and clarify it."

Burlington's accused stocking of three-end 20 denier infringes Claims Nos. 8, 9, 10, 21, 22, 23 and 24 of the Bird Patent. Its stocking has the same weight and substantially the compressive force specifically set forth in those claims. The accused stockings made by Claussner-McCallum and Hudson infringe Claims Nos. 13, 16, 17, 21, 22, 23 and 24. Plaintiff Triumph knitting the three-end 20 denier high torque monofilament nylon infringes Claims Nos. 8, 9, 10, 21, 22, 23 and 24 of the Bird Patent.

The court holds that none of the plaintiffs willfully and deliberately infringed the patent but acted in good faith in the honest belief that as licensees of Patentex they had the right to make their stockings and were so advised by counsel. In no event should the plaintiffs be required to pay treble damages.

MISUSE OF PATENT

The lease agreement between defendants and Hanes Hosiery Mills Company contains provisions which clearly restrict the licensees from making or selling support stockings in competition with the owner of the patent. The patent confers no monopoly to the patentees for the exclusive manufacture of a support stocking or the right to prevent anybody from making or selling a stocking with its qualities such as the two-end 15 denier stocking made by some of the plaintiffs before the issue of the patent, and particularly the three-end 15 denier support stockings made by Burlington Mills. In this connection, it is to be remembered that the defendants are asserting the exclusive use to the word "support" as descriptive of a stocking when they knew full well that the two-end and three-end nylon stockings made by the plaintiffs had support characteristics, but for reasons convenient to the defendants they described them as "stretch" stockings.

In Paragraph 2(a) licensee agrees "it will not manufacture, sell or distribute any support stockings for women except in accordance with the terms of this lease. Licensee agrees it will not represent any stockings to be support stockings for women except stockings manufactured under this license."

Paragraph 2(b) contains this provision: "All support stockings for women manufactured * * * by licensee shall possess * * * compression characteristics explained in United States Letters Patent No. 2,841,971. A stocking constructed of one or two-end 15 denier stretch nylon yarn in boot and foot shall not be considered within the scope of this license agreement, and licensee may manufacture, sell and distribute stretch stockings and royalties shall not be applicable thereto."

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In connection with the excerpts of the preceding, one clearly shows that the licensor was extending his monopoly beyond that conferred by the patent and was endeavoring to prevent licensee from making a stocking of one or two end 15 denier stretch nylon yarns. The exclusion clause restricted to the one and two ends of 15 denier clearly indicates that the contract prevents licensee from making any stocking and referring to it as a support stocking and requiring him to refer to it as a stretch stocking instead. It follows from what has been said that the patentee is using the lawful monopoly granted by the patent as a means of suppressing the manufacture and sale of competing unpatented articles and is endeavoring to extend the bounds of its lawful monopoly to give it the exclusive market for every support stocking when the patent does not extend that far. This practice is unlawful. National Lockwasher v. George K. Garrett Co., 3 Cir., 137 F.2d 255; McCullough v. Kammerer Corp., 9 Cir., 166 F.2d 759; Cf. Chiclets, Inc. v. June Dairy Products, D. C., 89 F. Supp. 814; Steffens v. W. J. Schoenberger Co., D. C., 90 F. Supp. 710; Russell Co. v. Consumers Insulation Co., 3 Cir., 226 F.2d 373; United Shoe Machinery Co. v. United States, 258 U. S. 451-458, 42 S. Ct. 363, 66 L. Ed. 708.

The language of the instant license agreement differs from that construed in North Drive-In Theatre Corp. v. Park-In Theatres, Inc., 10 Cir., 248 F.2d 232; United Lens Corporation v. Doray Lamp Co., Inc., 7 Cir., 93 F.2d 969, and Carter Products v. Colgate-Palmolive Company, D.C., 164 F.Supp. 503, which are cited by the defendants. The misuse of the patent requires a court of equity to leave the defendants without equitable relief, either for an accounting, or by way of injunction.

On the counterclaim of the defendants against Burlington and Claussner-McCallum for unfair trade and use of good will of defendants on the charge of copying its advertising material, the defendants have failed to show by a preponderance of the evidence that either of these plaintiffs has engaged in unfair practice or wrongfully used the defendants' trademark on advertising matter. It is true that in some respects there are close similarities between the advertising of the plaintiffs and that of the defendants, but the proof is wholly insufficient to establish by a preponderance of the evidence that any customers of the defendants were misled or confused. It is incumbent on the defendants to produce adequate proof that it has been damaged by the use of its material. The bulk of the evidence offered by the defendants relates to the pictures of women wearing stockings and of the functions which the stockings render to the leg of the wearer. However, the pictures employed and the language descriptive of the product truly illustrate the product of the plaintiffs. The defendants cannot properly exclude the plaintiffs and others from displaying stockings on the legs of a woman regardless of the pose in which she is portrayed. Moreover, Burlington in its advertising has distinctly exhibited its name as the producer of its stocking in bold letters which should distinguish it from the product of the defendants. In like manner Claussner-McCallum prominently and in bold letters designate their stocking as "Comfo", which definitely distinguishes it from that of the defendants. This is in accord with Judson Dunaway Corporation v. Hygienic Products Co., 1 Cir., 178 F.2d 461, 465, in which the plaintiff was denied relief both for violating the trademark and unfair competition. In that case plaintiff marketed and promoted its toilet cleanser with representation of a woman pouring the con-

tents of a can into a watercloset. The court held that the plaintiff was "not * * * entitled to appropriate exclusively unto itself the merely descriptive element of its composite marks. It cannot prevent the defendant from using on its labels or in its advertising * * * a representation of material flowing from a can into a watercloset bowl. * * * Nor do we think that the plaintiff can prevent the defendant from going one step further and advertising its product by showing it in use by a person, and, moreover, in use by the sort of person who would normally be expected to use it, that is, by a woman."

The Fourth Circuit Court, in Reddy Kilowatt, Inc. v. Mid-Carolina Electric Cooperative, Inc., 240 F.2d 282, 285, held:

> "It does not follow that the plaintiff has made out a case. Its claims to an exclusive field are not entitled to the breadth which is implicit in its arguments. It must be kept in mind in the first place that the plaintiff was not the first to make use of a fantastic humanized figure for advertising purposes; nor was it indeed the first to use such a character in the field of electricity."

The same situation was presented in Jantzen Knitting Mills v. West Coast Knitting Mills, 46 F.2d 182, 184, 18 C.C.P.A., Patents, 843, displaying a swimming suit worn by a girl standing in a diving posture. It was there stated:

> "We do not think that appellant has a right to monopolize the figure of a diving girl clad in a swimming suit. It is a well-settled principle of the trade-mark law that a mere representation of the merchandise on which the mark is used cannot be adopted as a trade-mark." Nims Unfair Competition and Trade-marks, Fourth Edition, Page 680.

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A decree will be entered in this case declaring in the first instance that the patent in suit has been rendered invalid by reason of the willful concealment from the Patent Office of the Burlington three-end monofilament torque nylon yarn which was fully known to the patentees and known to have been in use for more than a year before they filed their application for the patent in suit. But for this fact the court would hold the patent valid as to the claims set forth above and infringed, but that the defendants are not entitled to equitable relief either by way of accounting or injunction, because of the misuse of the patent, and that the defendants be restrained from interfering with the plaintiffs in the manufacture and sale of the accused stockings and from threatening to sue or instituting action for infringement against the customers of the plaintiffs, and that the defendants be taxed with the costs.

The court will not assess any attorney fees. All of the parties, both plaintiffs and defendants, are licensees under Patentex to heat treat and impart torque to monofilament nylon yarns. Patentex advised its licensees that they had the right to utilize the privileges granted under the license to heat treat and set and twist monofilament nylon yarns and to make hosiery therefrom without infringing any valid claims of the Bird Patent. The plaintiffs in good faith believed that they had the right to do so and were advised by counsel of their right to do so, and if the defendants in this case had prevailed, I doubt if this court would have taxed attorney fees. In respect to the defendants, the court is of the opinion that they should not be taxed with attorney fees for the plaintiffs.